Part XIV

1950 **File No.** 2004/36

A CLASS

P.W. DEPARTMENT

EL BRANCH

Subject:— Jog - Power.

Utilisation of — in the.

Southern area of Bombay State.

A EN 50

IV

Part XIV

File No. 2004/36 EL

Std. Scott. Slip 24-A

G.R., G.D., No. 2408, dated 22-6-22.]

Correspondence

DOCKET SHEET

Subject :—

File No. _____

_____ **DEPT.**

_____ **BRANCH.**

References :—

Date	To whom sent.	Notes and instructions.

2004/36/86205.

El.Br. P.W.D.

Submitted.

2. In G.L. No.2004/36-I-El., dt. 29-7-1949, Govt. has approved the El. Commr's proposals for the distribution of 10,000 kW power available at Jog and 1,500 kW at Harihar, and has requested that officer to submit detailed plans and estimates for the scheme. He has accordingly submitted a report with p. & e. for administrative approval to the scheme. He also requests Govt. to take immediate steps for the appointment of the required gazetted staff.

3. Besides suppling power to the townships, mentioned in para. 2 of the G.L. referred to above, it is also proposed to supply rural loads to the extent of 1,000 kW around Hangal and Ranibennur-Haveri areas.

4. The capital cost of the scheme as estimated by the El. Commr. previously was Rs.176 lakhs (Rs.132 lakhs spread over five years for distribution of 10,000 kW available at Jog + Rs.44 lakhs spread over a period of 3 years for distribution of 1,500 kW available at Harihar). The total cost of the scheme now estimated is about Rs.213.06 lakhs which is made up as below :-

	Rupees in lakhs.
(a) Surveys	1.51
(b) Transmission lines	86.89
(c) Substations.	64.16
(d) Civil Engineering Works	26.11
(e) Rural Distribution	27.41
(f) Interest during construction	6.98
	213.06

This is according to the lump provision made by the El. Commr. for rural distribution. A revised proposal will be submitted by him when the land survey of the

Hangal ...

Hangal and Ranibennur - Haveri areas is completed. Please see para. 4 of the El. Commr's letter. P-3 of f.c.

5. The rates for elec. supply, proposed by the El. Commr. previously, and the rate structure now given by him, differ substantially. Please see the tentative rates at p.p. 197 and 201 ~~ante~~ of file put up below and those now given at p.20 of the report put up below. These rates are comparable with the rates elsewhere and are certainly cheaper than those available in any thermal plant which any industry may think of. With these rates the scheme becomes self supporting in the 3rd year of service, when there will be an accumulated deficit of 2.72 lakhs. This deficit will be wiped out in further three years after which the scheme will yield a net revenue of about Rs..88 lakhs in the sixth year., and about Rs.1.25 lakhs in the 7th and subsequent years over and above the interest at 3½% on the capital cost of the scheme and full allowance for depreciation and operation and maintenance. Please see the financial forecast at p.25 of the report below.

6 This financial forecast is worked out by taking into consideration only revenue due to the rates for elec. supply. The El. Commr. was instructed that the financial forecast of the scheme should take into account the electy. duty, vide (ii) of para 2 of G.L. at p.223 ~~ante~~ of file put up below. The El. Commr. has observed P-30 of f.c. that the electy. duty recovered will be an additional income to Govt. and it has not therefore been taken into account in the financial statement. Please see in this connection para. 4 of the F.D. note at p. 217 ~~ante~~ of file below. The El. Commr. may again be requested to submit a revised financial forecast after taking into account the electy. tax.

7 As regards other instructions given in the G.L. vide (i) and (III) at p. 223 ~~ante~~ of the file below, the rate fixed in the case of aluminium industry is 0.4 anna a unit - vide p.20 of the report below.

8 The Industry was given an assurance by the E. & I.D. to supply energy at 0.25 anna per unit vide para. 2 of the E. & I.D. note at p.211 ~~ante~~ of the file below. The rate proposed for Paper

Mills ....

Mills is .55 anna per unit. The El. Commr. had assumed that Govt. would take immediate active steps for the establishment of paper and pulp industry in the area, vide portion marked A at p. 191 ante. of file below.

9 The El. Commr. has given in the report other details of the schemes such as lay out of the system, load and revenue, interest charges, depreciation, operation and maintenance etc. Administrative approval may be accorded to this scheme in U.O. consultation with the D.D. and the F.D.

Thro: E.B.(I) and A.B.(II) and D.E.(I).

10. The question of sanctioning estabts, both Gazetted and non-Gazetted, for the Jog scheme is separately under consideration in file No. 1184/48 which is under ref. to the Elect. Commr. since 21-11-50. The Elect. Commr. has been requested to point out a source to meet the expdre. on account of the estabts. during the current year, if the estabts. are sanctioned immediately. The receipt of the file is awaited.

Elec Commr may first be requested to submit a revised financial forecast after taking into account the electricity tax. as required by the F.D. After its receipt the P & E may be approved administratively, in U.O. consultation with the D.D & F.D

The Elec. Duty can be worked out approximately by applying a percentage to cost of the units sold annually — the percentage

being maintained in Elec. Supply Cos.
of comparable size and diversity
of demand

27/11

29/1

El. Br
Resubmitted.

2. The El. Commr. may be requested to submit financial forecast with refce. to the Dy. Secy's and the Secys notes of 27-11-50.

1/12/50

4/12/50

To Elec Commr. of D.S. 12.50
+ with file no 2004/36 V

8.E(T) 43 5/12.

OFFICE OF THE
ELECTRICAL COMMISSIONER WITH
THE GOVERNMENT OF BOMBAY
Inward No. 10 899
Date 5/12

Duplicate copy of this is arranged in the corresponding section

JOG - KARNATAK ELECTRIC C[illegible]

FINANCIAL FORECAST

All amounts are in Rs.lakh

Year	Capital Cost	Outlay during the year	Amount of (2) plus half of (3)	Amount for interest (4) plus (8) of previous year	Amount for depreciation on (2) plus 6.98 lakhs being the accumulated interest during construction	Interest on (5) @ 3½%	Cumulative interest during construction (16)-(14)	Amount after Mysore & M[illegible] ciation (14)
1	2	3	4	5	6	7	8	9
1950-51	[illegible]	12.00	6.00	6.00	-	0.21	0.21	-
1951-52	12.00	86.74	55.37	55.58	-	1.97	2.18	-
1952-53	98.74	72.26	134.87	137.05	-	4.80	6.98	-
1953-54	*171.00	28.29	185.15	192.13	177.98	6.73	-	7.35
1954-55	199.29	4.60	201.59	208.57	206.27	7.30	-	10.32
1955-56	203.89	2.19	204.99	211.97	210.87	7.43	-	13.86
1956-57	206.08	-	206.08	213.06	213.06	7.47	-	13.76
1957-58	"	-	"	"	"	"	-	"
1958-59	"	-	"	"	"	"	-	"
[illegible]-60	"	-	"	"	"	"	-	"
1960-61	"	-	"	"	"	"	-	"
961-62	"	-	"	"	"	"	-	"
962-63	"	-	"	"	"	"	-	"

*

Note:- The Scheme becomes self supporting from the end.

DPD.14/12/50/

Statement No. I.

Revised & including
Revenue due to Electricity Tax)

SCHEME

vised)

Balance of interest to be met (17) plus (12) of previous year (9)	Interest of previous year's amount in (10) @ 3½%	Total interest to be met from next year's revenue (10) plus (11)	Net Revenue to Government	Expenditure on (6) @ 8½%	Operation and Maintenance (2) @ 8.5%	Charges to Mysore Government	Revenue including Electricity tax at 0.125 as per unit sold	REMARKS
10	11	12	13	14	15	16	17	18
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	plus 0.62	3.56	4.25	7.43	22.59	*Year of
-	-	-	" 3.02	4.13	4.98	9.24	28.67	Service
-	-	-	" 6.43	4.22	5.09	10.84	34.01	
-	-	-	" 6.29	4.26	5.15	10.84	34.01	
-	-	-	"	"	"	"	"	
-	-	-	"	"	"	"	"	
-	-	-	"	"	"	"	"	
-	-	-	"	"	"	"	"	
-	-	-	"	"	"	"	"	
-	-	-	"	"	"	"	"	

of First year of Supply.

/

Below u.o.r., P.W.D., No.2004/36/86205 dated 4-12-50.

.....

Electric Grid Offices.

A revised financial forecast which takes into account electricity tax at 0.125 anna per unit is submitted herewith in duplicate. From the revised forecast, it will be noticed that the scheme is not only self-supporting from the end of the first year of service, but will leave a net revenue of about Rs.0.62 lakh in that year. This surplus increases in subsequent years leaving a surplus of about Rs.6.29 lakhs in the fourth year and onwards.

Encl:- 2 copies of Revised Financial Forecast.

P731
18-12-50.

Secy. to Govt.,
P.W.D., Bombay.

U.O.R. No.T.8/1/ 30373
Bombay, dated 19 Decr., 1950.

EeI
20/12

C/-
13/12/50.

2004/36

104295

V

2004/36 XII
104295

P.W.D.

Ele. Rs (I)

Submitted with refce. to the Dy. Secy's and the Secy's notes at pps. 3-4 ante.

2. The Elec. Commr. has furnished the revised P-5 financial forecast which takes into account electy. tax at 0.125 anna per unit. This forecast shows that the scheme leaves a net revenue of about Rs. 0.62 lakh at the end of the first year and Rs. 6.29 lakhs from the fourth year of opration onwards, over and above the interest at 3½% on the capital cost of the Scheme.

3. The plans and estimate may be approved administratively in co. consultation with the D.D. and Fd. three EB(I), AB(IV) & DE(I)

... DEPARTMENT. PWD ... 13-1-51 Serial No. A 2379

x are at note a page

K D'S 8/1 AB 10/1/51

D.S.

Secy.

8/1/51 E.B. (I). addl. The Estabt. for the Jog-Karnatak Electric Grid Scheme has been sanctd vide G.O. No. 118H/H8, dt the 21-1-51 since

AB 10-1-51

PB 10/1/51.

K 11/1/51

PB 14/1/51

Recd + with file no 2004/36 V + Return

13/1

to Dev & Fin Debtts, dt 13-1-51

10

Dev. Deptt.

Seen and passed on up to the F.D. Attention is invited to paras 3 and 8 of P.W.D. note, dated the 22/11/50.

8/16/1/51

17/1/51

V.S.P. 17.1.51

~~H.S.~~ D.S.

Secy

We have not heard further in the matter of the proposed alumina refining plant expected to take a load of 3000 kw. The original power cost anticipated and communicated was .25 a unit. The present proposal of .4 a unit may prove on the high side as the industry may prefer to move to Mysore State. The principal factor in favour of location at Jarkal is the proximity to the heavy raw material bauxite and in actual negotiations the final rate for electric power may have to be decided.

This is not however to argue against the project which indeed is of an essential and urgent character. D.D. would press for its acceptance

FIN. PWRI 20.1.51 31662

8/18/1/51

Note to F.D. dt. 19/1/51.

Finance Dept. P.W.R.

Dept. note dt. 14.6.49 Submitted with reference to this

2. The P.W.D. has proposed to approve administratively the plans & estimates, the letter amounting to Rs. 213.06 lakhs for Jog-Karwalale Electricity Scheme. The distribution of 10,000 kw power available from the Govt. of Mysore at Jog and 1500 kw available at Honnali to certain places in the Karnalak was approved by Govt. under G.O. P.W.D. No. 2004/36-V-EL dt. 29/7/49. In anticipation of the approval to plans & estimates the scheme was provided for in the current year's budget by means of

X with D Report

i) P.W.D. 2004/36-V-EL & SLPZ/1952/218

ii) SLPZ/1953

a new item (vide item 67 in Brown Book for 1950-51). A provision of Rs. ~~45.005~~ 45.05 lakhs has been admitted for the scheme by Govt. for the next year's budget. Orders for certain machinery have also been placed with firms abroad. The scheme accordingly is in progress in a sense.

3. The financial aspect of the scheme is dealt with in chapter IV of the Report. The various rates for establishment, tools & plant, depreciation & maintenance charges etc. need attention. Please see para. 168 of the P.W.D. Manual Vol.I & rules in Appendix V of the same Manual Vol.II. The basis of percentage adopted for Tools & Plant, work charged establishment, contingencies and establishment (Head office & general) is not clear. The P.W.D. may be requested to clarify & state what percentage have been adopted in this behalf in respect of the North Gujarat & South Gujarat Schemes approved by Govt.

It will be noticed that no provision has been made for the following items:-

i) Leave & pensionary allowances of establishment,

ii) Indirect charges such as

a) capitalisation of abatement of land revenue on area occupied by works and

b) Audit & accounts charges.

The P.W.D. may be requested to state why these have been left out, though according to the rules quoted above, it is necessary to include ~~xxxx~~ etc. in the capital outlay. Pensionary charges have been left out presumably because the staff under the Grid does not get pension. But it has been allowed the benefits of contributory P.F. Scheme.

4....

12

4. The rates of interest, depreciation and operation & maintenance adopted seem reasonable. But the P.W.D. may be requested to state whether the same rates have been adopted in respect of South Gujerat & North Gujerat Schemes.

5. Regarding the rates of supply of power to the consumers mentioned on pl20 of the report, it will be seen that they differ from those approved previously which were indicated in the Fourth Note by the Elec.Commr. on the subject. The proposed rates are lower than those approved and also lower than those approved for North Gujerat Scheme. This shows that there is no case prima facie for considering the question regarding subsidy to new industries on account of electricity duty stipulated in para.(ii) of G.L.,P.W.D. No.2004/36-V-LI. dated 29-7-49. Including the electricity duty the revised financial forecast shows that the scheme will be self-supporting from the end of the first year of service & will yield a revenue of Rs.68 lakhs in that year. There seems, therefore, no objection to approve the revised rates of supply proposed provided the question of subsidy referred to is dropped and the working cost remains at present level.

6. For distribution of Jog power in Hubli and Haveri areas a lump provision of Rs. 10,00,000 (gross) or Rs. 7,30,000 (net) has been made in the current year's budget under "81-A". For the next year's budget, a provision of Rs. 45,05,400 has been made for the above scheme.

13.2.51.

14.2.51

Report - XIV

P. W. D.

2004/36 XIV

14991

2004/26

14991

P.W.D.

Ex.C.Bn (E)

Submitted with letter to the Govt. to the D.D. and the P.D. dated the 13-1-51.

2. The D.D. has agreed to the proposal made by this Deptt. and has framed for acceptance of the Project. The P.D. has raised certain points in connection with the Financial Aspect of the Scheme, vide paras 3 and 4 of its note written. The C.E., Bombay Elec. Grid may be requested to offer remarks on the points raised by the P.D.

20/3/51

14/3/51

D.S

C.E. Bbay Electric Grid 24-3-51

OFFICE OF THE
ELECTRICAL COMMISSIONER WITH
THE GOVERNMENT OF BOMBAY
Inward No. 8339
26/3

G. R., H. L. G. D., No. 2[illegible]38, dated 20-12-[illegible]

Restt. Slip 53 a.

SEPARATOR

Letter.

No.T8/1/ 24822
Electric Grid Offices,
Mercantile Bank Building, Fort,
Bombay.1: 18 October, 1950.

To

The Secretary to Government,
Public Works Department,
Bombay.

Subject:-Jog-Karnatak Electric Grid Scheme.
Report on Detailed Plans & Estimates.

Reference:-G.L.No.2004/36-V-EL dated 29.7.49.

With reference to the above letter I submit herewith a report with plans & estimates, on the Jog-Karnatak Electric Grid Scheme, for the distribution of 10,000 KW at 110 KV busbars at Jog and 1,500 KW at 66 KV at Harihar, which the Mysore Government have agreed to supply to Bombay Government.

2. The scheme consists of two sections. The Jog-Hubli section has a main 110 KV transmission line which connects the Mahatma Gandhi Power House at Jog, through a switching station at Kavalvad, with the main 110 KV substations at Dandeli & Hubli. At Sirsi this main line is tapped and energy is stepped down to 11 KV to meet the demands of Sirsi and Hanagal. At Hubli the voltage is stepped down to 33 KV and 11 KV. Power is transmitted to Gadag at 33 KV and to Dharwar at 11 KV. It is distributed in Hubli at 11 KV.

The Harihar-Haveri section consists of a 66/33 KV sub-station at Harihar and a 33 KV transmission line connecting Harihar with Ranibennur and Byadgi; at Byadgi the voltage is stepped down to 11 KV for power supply to Haveri.

Besides supplying power to the townships mentioned above it is also proposed to supply rural loads to the extent of 1,000 KW around Hanagal & Ranibennur - Haveri areas.

3. The total estimated cost of the scheme is about Rs. 213.06 lakhs which is made up as follows:

(a)	Surveys.	Rs.1.51 lakhs.
(b)	Transmission lines	" 86.89 "
(c)	Substations	" 64.16 "
(d)	Civil Engineering Works	" 26.11 "
(e)	Rural Distribution	" 27.41 "
(f)	Interest During Construction	" 6.98 "
(g)	Total-	Rs.213.06 lakhs.

Only....

Only lump sum provision has been made for rural distribution but a revised proposal will be sent to Government as mentioned in the report when the load survey of the Hanagal and Ranibennur - Haveri areas are completed.

4. The report presented herewith differs in many respects from the Fourth Note on the utilization of Jog Power submitted vide this office No.H8/6116 dated 14-4-1949. The changes were necessitated as additional data on the prospective loads was collected in the intervening period. The main omissions are the Lift irrigation pumping loads along the Tungabhadra river and the Water Supply Pumping load at Nirsagar. The main additions are the rural loads at Hanagal and Ranibennur-Haveri areas. Regarding cost also, the prices adopted in the estimates are the latest available with suitable alteration where considered necessary. The rates proposed to the consumers also differ from those proposed in the Fourth Note but are lower than the rates, recently approved by Government for the North Gujarat Scheme. The rates are kept uniform for both the Jog and Harihar sections notwithstanding the appreciable difference in the Mysore Government's supply rates at the two places. The actual tariffs will be framed & submitted to Government for approval when the scheme is nearing completion and actual costs are more or less known.

5. As regards the instructions in G.L. No.2004/36-V-EL dated 29.7.49, I have to state as follows:

(i) The rate of supply to the Aluminium industry is refixed provisionally at 0.4 an/unit after taking into consideration the cost of power upto the point of location of the industry.

(ii) Electricity duty is not taken into account while preparing the financial forecast of the scheme. The receipts on account of duty, will be an additional revenue to Government.

(iii) Details regarding the capital cost, rate of interest, depreciation and Operation and Maintenance charge will be found in the report.

6 It.....

6. It was not possible to submit the report earlier because the entire work on this scheme has had to be done only by a limited staff. The Executive Engineer for the scheme is still not appointed and even for the Assistant Engineer I have only made an officiating appointment of a Junior Engineer.

7. I recommend that Government may be pleased to approve the scheme administratively at an early date and to take immediate steps for the appointment of the required gazetted staff.

P Bhadwani.
Electrical Commissioner
with the Government of Bombay.

Encl: Two copies of Report
with Drawings.

SDK/14.10.

for further phs-hl
see GJK 1551/32829

EI(T)
19/10
in
2004/36.
86205